

## REMARKS

The office action of May 26, 2005 has been reviewed and its contents carefully noted. Reconsideration of this case, as amended, is requested. Claims 1 through 43 remain in this case, claims 1, 5, 21, 23, 26 and 29-42 being amended and claim 43 being added by this response. No new matter has been added. Claim 43 is fully supported by claims 30-34, as filed, as well as page 20, line 11 through page 22, line 21.

### Restriction Requirement

The Examiner has made an election of species requirement and has identified five species as follows:

Species I – directed to a semiconductor device having an epitaxial layer on a substrate; a cap layer on the epitaxial layer; and a third material lattice-matched or nearly lattice matched to the substrate.

Species II- directed to a semiconductor device having a plastically relaxed  $\text{Ga}_{1-x}\text{In}_x\text{As}$  layer grown on top of a substrate and a defect-free  $\text{Ga}_{1-y}\text{In}_y\text{As}$  layer grown on top of the plastically relaxed layer.

Species III- directed to a semiconductor device having a plastically relaxed  $\text{Ga}_{1-x}\text{In}_x\text{As}$  layer grown on top of a substrate and a defect-free  $\text{Ga}_{1-y-z}\text{In}_y\text{Al}_z\text{As}$  layer grown on top of the plastically relaxed  $\text{Ga}_{1-x}\text{In}_x\text{As}$  layer.

Species IV- directed to a semiconductor device having a plastically relaxed GaN layer grown on top of a substrate and a defect-free GaN layer grown on top of the plastically relaxed GaN layer.

Species V- directed to a semiconductor device having a plastically relaxed  $\text{Si}_{1-x}\text{Ge}_x$  layer grown on top of a Si substrate and a defect-free  $\text{Si}_{1-y}\text{Ge}_y$  layer grown on top of the plastically relaxed  $\text{Si}_{1-x}\text{Ge}_x$  layer.

The Applicant respectfully elects Species I, recited in claims 1-29 and 37-42. The Applicant has amended the claims to include a generic claim 43, which includes all of the

species the Examiner has identified. If claim 43 is allowed, the Applicant respectfully requests consideration of all of the species.

This requirement for election as best understood is respectfully traversed.

All of the claims recite related inventions in that each recites a semiconductor device. All of the inventions would be searched within the same classes and subclasses. Even if some of the inventions would be classified separately, a thorough search of the prior art for any one of the inventions would include the classes and subclasses of the other inventions.

The Applicant requests that the election of species requirement be withdrawn. If the Examiner disagrees, or believes for any other reason that direct contact with Applicants' attorney would advance the prosecution of the case to finality, he is invited to telephone the undersigned at the number given below.

### Conclusion

Applicant believes the claims, as amended, are patentable over the prior art, and that this case is now in condition for allowance of all claims therein. Such action is thus respectfully requested. If the Examiner disagrees, or believes for any other reason that direct contact with Applicants' attorney would advance the prosecution of the case to finality, he is invited to telephone the undersigned at the number given below.

"Recognizing that Internet communications are not secured, I hereby authorize the PTO to communicate with me concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file."

Respectfully Submitted:

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